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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,707	10/07/2005	Helmut D. Link	246472008500	6815

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EXAMINER

SCHILLINGER, ANN M

ART UNIT	PAPER NUMBER
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3738

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/552,707

Applicant(s)

LINK ET AL.

Examiner

Ann Schillinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/7/05, 3/28/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 2, 5, 6, 8, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitations "the portion of a lower prosthesis surface" and "the main direction of extent." Claim 6 recites the limitations "the portion of an upper prosthesis surface" and "the main direction of extent." Claim 8 recites the limitation "the specified shape." Claim 11 recites the limitations "the cervical spine" and "the convex curvature." There is insufficient antecedent basis for the limitations in these claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 11, 2-6, 8, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Zubok et al. (U.S. Pub. No. 2004/0176850). As best understood by the examiner, Zubok et al. discloses the limitations of claim 11 as follows: an intervertebral joint prosthesis (100) configured for implantation into an intervertebral space between adjacent vertebral bodies of the cervical spine (paragraph 0014), which intervertebral space is delimited by end plates of the adjacent vertebral bodies whose end plate surfaces whose surfaces laterally adjacent to a

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substantially flat central area include edge zones that are more strongly curved than the substantially flat central area, at least one of the prosthesis surfaces (200, 300) being configured to bear on a vertebral body surface having a lateral (lateral portions of prosthesis: 202, 302) extend reaching into the edge zones, the convex curvature of this prosthesis surface in a frontal plane being at least as great as the corresponding curvature of the end plate surfaces (curved outer edges of prosthesis, see Figures 1-5).

As best understood by the examiner, Zubok et al. discloses the limitations of claim 2 as follows: the prosthesis as claimed in claim 11, having a height (see Figure 1-5) in a caudo-cranial direction relative to an orientation of the prosthesis in an implanted position in portions of the prosthesis configured to engage the lateral edge zones approximately equal to a height of the intervertebral space at the location of the edge zones, and having a height in portions of the prosthesis configured to engage the central area greater than a height of the intervertebral space at the location of the central area (the height of the prosthesis allows it to contact the vertebral plates of the intervertebral space, see paragraph 0054, with a greater height at the central portion, via elements 210a, 210b, 310a, and 310b).

Zubok et al. discloses the limitations of claim 3 as follows: the prosthesis as claimed in claim 11 or 2, wherein the prosthesis surface is provided with elevations and depressions in the central area but not in the edge area (210a, 210b, 310a, and 310b).

Zubok et al. discloses the limitations of claim 4 as follows: the prosthesis as claimed in claim 11 or 2, wherein the prosthesis surface is toothed in the central area (210a, 210b, 310a, and 310b).

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As best understood by the examiner, Zubok et al. discloses the limitations of claim 5 as follows: the prosthesis as claimed in claim 11 or 2, wherein an angle of inclination of the portion of a lower prosthesis surface that is configured to engage the edge zones of the end plate surfaces in the frontal plane relative to the main direction of extent of the prosthesis relative to an orientation of the prosthesis in an implanted position is at least 20 degrees (part of the lower surface of the prosthesis has an angle of at least 20 degrees, as shown in Figure 4 where element 310b forms such an angle).

As best understood by the examiner, Zubok et al. discloses the limitations of claim 6 as follows: the prosthesis as claimed in claim 11 or 2, wherein an angle of inclination of the portion of an upper prosthesis surface that is configured to engage the edge zones of the end plate surfaces relative to the main direction of extent of the prosthesis relative to an orientation of the prosthesis in an implanted position is at least 0 degrees (part of the upper surface of the prosthesis has an angle of at least 0 degrees, as shown in Figure 4 where element 210b forms such an angle).

As best understood by the examiner, Zubok et al. discloses the limitations of claim 8 as follows: the prosthesis as claimed in claim 11 or 2, wherein the specified shape of the prosthesis is limited to its dorsal half. Examiner is interpreting the specified shape to indicate that the prosthesis matches the shape of the intervertebral space at the dorsal half. The reference matches such a shape only behind frontal elements, 206 and 306.

Zubok et al. discloses the limitations of claim 9 as follows: the intervertebral joint prosthesis as claimed in claim 11 or 2, wherein the surface of at least one of its cover plates (200,

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300), whose size is dimensioned to substantially utilize the naturally provided surface extent of the intervertebral space (paragraph 0023), has a central area (202, 302), which extends approximately parallel to the main plane of extent of the cover plate, and, adjoining this in the dorsolateral direction, a surface (206, 306) beveled relative to the central area.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zubok et al. in view of Errico et al. (U.S. Pub. No. 2003/0069586). Zubok et al. discloses the invention substantially as claimed, however, Zubok et al. does not disclose prosthesis with a width that is at least 1.5 times as great as the depth. Errico et al. teaches a prosthesis with a width that is at least 1.5 times as great as the depth in paragraph 0016 for the purpose of allowing the prosthesis to fit properly within a correspondingly dimensioned intervertebral space. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make a prosthesis with a width that is at least 1.5 times as great as the depth in order to allow the prosthesis to fit properly within a correspondingly dimensioned intervertebral space.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zubok et al. in view of Michelson (U.S. Pat. No. 6,083,228). Zubok et al. discloses the invention substantially as claimed, however, Zubok et al. does not disclose an instrument set used to prepare the vertebral bodies to accommodate the prosthesis. Michelson teaches an instrument set used to

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prepare the vertebral bodies to accommodate the prosthesis in col. 2, lines 12-47 and col. 7, lines 11-49 for the purpose of providing adequate space and support for the prosthesis. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an instrument set used to prepare the vertebral bodies to accommodate the prosthesis in order to provide adequate space and support for the prosthesis

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zubok et al. in view of Gerbec et al. (U.S. Pub. No. 2003/0130739). Zubok et al. discloses the invention substantially as claimed, however, Zubok et al. does not disclose a portion of the upper surface having an angle between 10 and 30 degrees. Gerbec et al. teaches a portion of the upper surface having an angle between 10 and 30 degrees in paragraph 0100 for the purpose of facilitating the ease in the flexing of the upper support member. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make a portion of the upper surface having an angle between 10 and 30 degrees in order to facilitate the ease in the flexing of the upper support member.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Schillinger whose telephone number is (571) 272-6652. The examiner can normally be reached on Mon. thru Fri. 9 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached on (571) 272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ann Schillinger
March 30, 2007 3

A. Stewart
ALVIN J. STEWART
PRIMARY EXAMINER